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Theoretical principles of powder electrodes and possibilities of their use. W. Tomaszewski (Warsaw). *Przemyśl Chem.* 35, 822-823 (1958). Summary is given of 3 1/2 years' research on powder electrodes. Powder electrodes are subdivided into 2 classes. The 1st is the simple type, consisting of a conducting electrode covered by the same metal which forms the surrounding dispersed phase and a solution containing the cation of the metal. An example is a nickel-plated Pt wire surrounded by powder Ni and immersed in a solution of NiSO₄; this forms a simple Ni-powder electrode. All the others are named complex powder electrodes. An example is a Pt wire surrounded by Cu powder and immersed in K₂SO₄ solution. The properties of both types and their theoretical background are discussed. The potential of the powder electrode is very sensitive to the state of the surface of the dispersed phase. It seems that the investigations of the surfaces of solid phases by means of a powder electrode, may be far more accurate than those carried out by adsorption, calorimetric or catalytic methods, and more simple than those carried out by means of an electron microscope. The method of preparation had a small influence on the potential of the simple powder electrode. The degree of immersion, the covering of the Pt wire by the metal of the dispersed phase, the quantity of the powder, the aging of the powder, and the time of its contact with the solution, had no influence on the simple electrode. Adsorption on the metallic powder gave smaller changes in the potential of the simple electrode than in the complex one. Aging of the powder, method of preparation, state of the surface of the powder, the dipole moment of the solvent, the dissolved electrolyte had all a great influence on the potential of the complex electrode. Small quantities of adsorbed ions changed the potential of the complex electrodes to a large extent. The possibilities of practical implications of the powder electrodes in the field of catalysis and surface investigations are evaluated.

M. Solomaniuk

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TOMASSI, W.; MIAZEK, H.

"Potentiometric investigation of the catalyst $\text{Zn}_2\text{Fe}(\text{CN})+\text{Cu}^{++}+\text{Fe}\dots$
showing catalytic ion antagonism."

p. 446 (Przemysl Chemiczny) Vol. 12, no. 8, Aug. 1956
Warsaw, Poland

SO: Monthly Index of East European Accessions (EEAI) LC. Vol. 7, no. 4,
April 1958

Category: Poland / Physical Chemistry - Kinetics. Combustion.
Explosives. Topochemistry. Catalysis.

B-2

Abs Jour: Referat Zhur-Khimiya, No 9, 1957, 30061

Author : Tomassi W.

Inst : Warsaw Polytechnic Institute

Title : Theoretical Foundations of the Action of Powder Electrodes and
the Possibilities of Their Utilization.

Orig Pub: Przem. chem., 1956, 12, No 9, 520-522

Abstract: Brief presentation of the results of the work conducted by the
Department of Physical Chemistry of the Warsaw Polytechnic Insti-
tute, on use of powder electrodes in the study of surface struc-
ture of dispersed bodies and investigations of genesis and pro-
perties of catalysts and adsorbents.

Card : 1/1

-27-

TOMASSI, W.

"Tentative classification and definition of systems for chemical thermodynamics."

p. 307 (Roczniki Chemii) Vol. 30, no. 1, 1956
Warsaw, Poland

SO: Monthly Index of East European Accessions (EEAI) LC. Vol. 7, no. 4,
April 1958

TCMASSI, W.; SWIERSZCZEWSKA, O.

"Conditions of stabilization of the potential of a metallic electrode immersed in a solution of foreign ions."

p. 343 (Roczniki Chemii) Vol. 30, no. 1, 1956
Warsaw, Poland

SO: Monthly Index of East European Accessions (EEAI) LC. Vol. 7, no. 4,
April 1958

... ..,

Mitold Tomassi and Wladyslaw Lewicki: "Potentiometric Investigation of the Adsorption Isotherms, Rechniki Chemii, Vol 30, No 3, Warsaw, 1956. Published from the Chair of Physical Chemistry, Warsaw Polytechnic, 23 Apr 56.

TOMASSI, WK

POLAND/Physical Chemistry - Electrochemistry.

B-12

Abs Jour : Referat Zhur - Khimiya, No 1, 1958, 559

Author : Witold Tomassi, Halina Wroblowa.

Inst : -

Title : Study of Copper Powder Electrodes. I. Determination of Standard Potential.

Orig Pub : Rocz. chem., 1956, 30, No 3, 873-880

Abstract : The emf of the element $\text{Cu}/\text{CuSO}_4/\text{Hg}_2\text{SO}_4$ was measured at nine concentrations of CuSO_4 at 25°. It was established that the diameter of the Cu powder grains does not influence the magnitude of the potential of the powder electrode (PE). The standard potential of PE ($E_0 = 0.3402 \text{ v}$) was determined, which agreed well with corresponding bibliographical data for smooth Cu electrodes.

Card 1/1

36 MAR 1957 14:00
11
Thermodynamic description of reacting systems through
which a stream of reagents is flowing. Witold Tomassi

(Politech. Warsaw). Zeszyty Nauk. Politech. Warszaw.
Chem. No. 2, 3-10(1957)(English summary).—A reaction
chamber into which substrates are fed and from which prod-
ucts are removed at a const. rate is considered in station-
ary state by means of equil. thermodynamics involving
de Donder's treatment of chem. reactions. J. Steckl

TOMASSI, WITOLD.

OR
1/1
Effect of particle size of reagents on the chemical equilibrium. Witold Tomassi (Politech. Warsaw). Zeszyty Nauk. Politech. Warszawy, Chem. No. 2, 11-17(1957)(English summary).—The increase in molar Gibbs free energy due to pulverization of a substance is calcd. for particles having plane and curved surfaces; thus the equil. const. is calcd. The effect is larger for flat-surface particles.
J. Stecki

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Distr: LELJ

Jeg

"APPROVED FOR RELEASE: 04/03/2001

CIA-RDP86-00513R001756210013-5

APPROVED FOR RELEASE: 04/03/2001

CIA-RDP86-00513R001756210013-5"

Tomassi, Witold

POLAND/Physical Chemistry - Thermodynamics, Thermochemistry, Equilibria.
Physical-Chemical Analysis, Phase Transitions.

B-8

Abs Jour: Referat. Zhurnal Khimiya, No 2, 1958, 3758.

Author : Witold Tomassi.

Inst : Warsaw Polytechnic Institute.

Title : Thermodynamic Discussion of Influence of Reagent Crushing on
Chemical Equilibrium State of System.

Orig Pub: Zesz. nauk. Politechn. warsz., 1957, No 30, 3-17.

Abstract: It was proved that the reagent crushing influences the equilibrium constant of a reaction to a considerable degree. The grinding of reacting substances produces an action, which is opposite to what takes place, if the reaction product was crushed. Crushing into particles with flat sides has a greater effect than crushing into particles with curved surface.

Card : 1/1

-8-

"APPROVED FOR RELEASE: 04/03/2001

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APPROVED FOR RELEASE: 04/03/2001

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TCMASSI, W.
TCMASSI, W.

International Committee of Electrochemical Thermodynamics and Kinetics.

p. 411 (Wiadomosci Chemiczne) Vol. 11, no1 7, July 1957, Wroclaw, Poland

SO: MONTHLY INDEX OF EAST EUROPEAN ACCESSIONS (EEAI) LC, VOL. 7, NO. 1, JAN. 1958

TOMASSI, W.
TOMASSI, W.

Activities of the Cebelcor (Belgium Center of Studies of Corrosion).

p. 412 (Wiadomosci Chemiczne) Vol. 11, no. 7, July, 1957, Wroclaw, Poland

SO: MONTHLY INDEX OF EAST EUROPEAN ACCESSIONS (KEAI) LC, VOL. 7, NO. 1, JAN. 1958

TOMASSI, W.

POLAND/Physical Chemistry - Electrochemistry.

B-12

Abs. Jour : Ref Zhur - Khimiya, No 8, 1958, 24299

Author : Tomassi, W., Wrobel, H.

Inst : -

Title : Investigation of Copper Powder Electrodes. II. Different Copper Preparations as Materials for Electrodes of First Kind and for Compound Electrodes.

Orig Pub : Przem. chem., 1957, 13, No 4, 207-211

Abstract : Determinations were made of c.m.f. of Cu (powder) | MSO_4 | Hg_2SO_4 | Hg cells with CuSO_4 and K_2SO_4 electrolytes; as powder electrode (PE) were utilized copper preparations (CP) produced in different manners. It was found that Raney CP, powders produced by reduction of different compounds of Cu, and also by calcining, at different temperatures, electrolytic Cu, exhibit different potentiometric properties. Differences in values of potentials E of individual CP are small in the case of CuSO_4 and much

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APPROVED FOR RELEASE: 04/03/2001

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POLAND/Physical Chemistry. Electrochemistry.

B

Abs Jour: Ref Zhur-Khim., No 15, 1958, 49714.

Author : Tomassi W.

Inst :

Title : Composite Powder Electrodes.

Orig Pub: Przem. chem., 1957, 13, No 9, 500-503.

Abstract: In continuing the study of properties of powder electrodes (PE) (RZhKhim, 1956, 3511, 57569, 57639) it was found that the use of PE for the purpose of studying the surface state of pulverulent substances by means of potentiometric measurements requires a number of conditions. The best offtake electrode is Pt. As solvents should be used C_2H_5OH or CH_3OH (in studying non-

Card : 1/2

ROLAND/Physical Chemistry. Surface Phenomena, Adsorption.
Chromatography. Ion Exchange.

B

Abs Jour: Ref Zhur-Khimiya, No 22, 1958, 73461.

Author : W. Tomassi, H. Jankowska, M. Prokopowicz.

Inst

Title : Study of Adsorbents and Adsorption Isotherms
Using Powder Electrodes.

Orig Pub: Przem. chem., 1957, 13, No 12, 683-688.

Abstract: The application of the method of powder electrodes (RZhKhim, 1956, 57569, 57639; 1957, 47585, 76764) to the study of adsorbent (activated carbon and silica gel) properties and to the determination of adsorption isotherms of various substances gave good results. At that occasion, it was attempted to clear the mechanism of pro-

Card : 1/2

TOMASSI, Witold

3. Determination of the specific surface of various activated carbons by potentiometric determination of the adsorption isotherm of hydrogen chloride. Witold Tomassi and Irena Wawrzyniak (Politech., Warsaw). *Przemysl Chem.* 37, 167-9 (1958) (English summary); cf. preceding abstr. The total and external surface of 5 different activated-C samples were measured (trade names: CS, CF, CI, CH, and CN). The potentiometric isotherms of HCl adsorption on these samples were detd. by the method of powder electrode. There is a relation between the size and the characteristics of the surface. The previous equation $P = aG^b$ holds true; P = potential of the powder electrode, G = surface concn. of HCl, and a and b are consts. A relation was found between $(ab)^{-1}$ and the capillarity of the C and also between a^b and the external surface of C. F. J. H.

Distr: 4E4j

TOMASSI, Witold

17 / Potentiometric investigation of the adsorption isotherm of chlorine on activated carbon. Witold Tomassi and Maria Prokopowicz (Politech. Warszawa, Warsaw). *Przemysl Chemicz.* 37, 486-8 (1968) (English summary).—The effect of adsorption of Cl (from aq. soln.) onto activated C on the potential of the C is very high. The study was made at 25° with activated C "CL" (Polish designation) that was previously freed of water-sol. components. The C bearing the adsorbed layer was applied as the dispersed phase of a powder electrode (C.A. 52, 18003b). During the adsorption of Cl from O-free and from aerated solns. similar results were obtained. The equation $p = aG^b$ can be applied; p = potential of the powder electrode (in H scale), G = the surface concn. of Cl (in g. of Cl per g. of C), and a and b are consts. ($a = 1680$ and $b = 0.306$). The potential of the powder electrode changes with time; this can be explained by considering the powder electrode as a Cl electrode. In the electrode process $2Cl^- = Cl_2 + 2e^-$, chlorine takes part as if desorbed and dissolved in H_2O and not as Cl from the adsorbed layer. F. J. Hendel

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TOMASSI, W.

POLAND/Chemical Technology. Chemical Products and Their
Applications. Part 2. - Electrochemical Industries.
Electroplating. Chemical Sources of Electric
Current.

Abs Jour: Ref. Zhurnal Khimiya, No 21, 1958, 71432.

Author : Witold Tomassi, Andrzej Houwalt.

Inst :

Title : Test of Chlorine-Silver Powder Electrodes.

Orig Pub: Przem. chem., 1958, 37, No 2, 77-83.

Abstract: The tested powder electrodes (PE) containing me-
talllic Ag and AgCl differed one from another by
the size of Ag grains and methods of preparation.
In some cases, Ag powder was substituted with Ag
wire, which served simultaneously as a lead-out
electrode. PE-s with Ag wire and coarse grained

Card : 1/2

Tomassi, W. ; Wawrzyniak, I.

An attempt to characterize the surfaces of various carbon preparations by the potentiometric determination of the adsorption isotherm of hydrogen chloride.
p. 157.

PRZEMYSŁ CHEMICZNY. (Ministerstwo Przemysłu Chemicznego i Stowarzyszenie Naukowo-Techniczne Inżynierów i Techników Przemysłu Chemicznego) Warszawa, Poland.
Vol. 37, no. 3, Mar. 1958.

Monthly list of East European Accessions (EEAI) LC, Vol. 9, No. 2, Feb. 19~~69~~⁶⁰.

Uncl.

POLAND / Physical Chemistry--Surface phenomena.
Adsorption. Chromatography.
Ion Exchange.

B-15

Abs Jour : Referat Zhur--Khimiya, No. 11, 1959, 38031

Author : Tomassi, W.; and Prokopowicz, M.

Inst : Not given

Title : The Potentiometric Study of the Isotherms for
the Adsorption of Chlorine on Activated Charcoal.

Orig Pub : Przemysl Chem, 37, No. 7, 465-468 (1958) (in
Polish with English and Russian summaries)

Abstract : The authors have made a potentiometric study of
the isotherm (I) for the adsorption of Cl on
activated CL charcoal which has been purified
from all water-soluble components. The charcoal
with its adsorbed film forms the disperse phase
of a powder electrode [sic]. The authors have

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POLAND / Physical Chemistry--Surface phenomena.
Adsorption. Chromatography.
Ion Exchange.

B-13

Abs Jour : Referat Zhur--Khimiya, No. 11, 1959, 38031

sults can be interpreted if the powder electrode (studied in 0.5 M aqueous KCl solution) is treated as a chlorine electrode. The atomic chlorine behaves in the electrode process taking place at the surface of the charcoal ($2\text{Cl}^- = \text{Cl}_2 + 2e$) as if it had desorbed and were dissolved in the aqueous phase. -- M. Lipets

Card 3/3

6238

541.183

Tomasz W. On the Equation of the Potentiometric Adsorption Isotherm.

„O równaniu potencjometrycznej izotermy adsorpcji. Przemysł Chemiczny. No. 5, 1959, pp. 285—290, 4 figs., 6 tabs.

This article deals with the empirical equation $\pi = aI^b$ of the relation of the potential of the powder electrode containing a powdered substance covered with an adsorption layer. The equation is shown to be fulfilled in all the cases so far examined. It was found that the theoretically deduced formula must have a different mathematical form. The physical meaning underlying the constants a and b of the empirical equation is discussed. An equation $\pi = A + B \lg I$ was deduced, based on the supposed mechanism of the process, and giving the dependence of the potential of the powder electrode on the surface concentration of the adsorbed substance for the case of powdered carbon with an adsorptive layer of chlorine. The physical meaning of the constants A and B and the method of theoretical computation are given. The latter equation is in conformity with the experimental material so far collected.

TOMASSI, W.

Distr: 4E2c(j)/4E3d

Evaluation of ferric oxide preparations as catalysts in the dehydrogenation of isopropyl alcohol by potentiometric, kinetic, and conductometric methods. W. Tomassi and J. Bulawa (Polytech. Inst., Warsaw). *Ukrain. Khim. Zhur.* 25, 699-707 (1959) (in Russian); cf. *CA* 52, 15307f. — The potential of powd. Fe_2O_3 electrodes increases with increasing effectiveness as catalysts in dehydrogenating iso-PrOH. As the reaction proceeds, the potential of electrodes made from the catalyst falls with decreasing activity. This is caused partly by adsorption of H, but it also is due partly to alteration of the surface structure at the temp. used, since removal of H does not restore the original value. During the course of the reaction, the elec. cond. decreases, indicating that the catalytic action involves donation of electrons. If steam is included in the gas stream, reduction of Fe_2O_3 is decreased; this results in a prolongation of the active life of the catalyst.

John Howe Scott

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COUNTRY : Poland
CATEGORY :

B-13

ARE. JOUR. : RZhKhim., No. 1959, No. 85531

AUTHOR : Tomossi, W.

ISS. :
TITLE : Potentiometric Investigation of Adsorption
Layers at Comminuted Coal.

ORIG. PUB. : Przem. chem., 1959, 38, No 2, 76-78

ABSTRACT : Description of use of the method of powder electrodes (PE) (RZhKhim, 1956, No 18, 57569) in the study of adsorption layers. A new variant of PE is described. Experimental data are presented which characterize the adsorption of CH_3COOH , Cl_2 , HCl , and NH_3 from gaseous and liquid phase at 7 samples of coal. At moderate values of surface tension σ , PE potential is $V = a\sigma^b$, where a and b are constants, the magnitude of which, according to the author, is closely correlated with structure and mechanism of process taking place in PE at solid phase-solution interface. Correlation is shown between magnitude of a and b, and specific surface S determined by flow method; and a

CARD: 1/2

36

Country : Poland
 Category : Surface Phenomena. Adsorption.
 Chromatography. Ion Exchange.
 Abs. Jour. : Ref Zhur - Khimiya, No 6, 1959
 Author : Tomassi, W.; Wawrzyniak, I.
 Institut. :
 Title : An Attempt to Determine Surface Characteristics
 of Different Charcoal Preparations by Potentio-
 metric Determination of HCl Adsorption Isotherm.
 Orig. Pub. : Przem. chem., 1959, 37, No 3, 157-159

B-13

12698

Abstract : The method of powder electrodes (PE) was used to determine isotherms of adsorption (A) of HCl at five different specimens of activated and unactivated charcoal (C) including also carbon electrodes for spectral analysis. The potential of PE depends on amount of adsorbed substance. This correlation is expressed by equation $V = aG^b$, where V is potential of PE, G -- surface concentration of HCl, a and b are constants. Total surface (S(tot)) of C under study was determined by BET method, and their external surface (S(ext)) -- by the method described by Kamack (RZhKhim, 1956, 62025). A correlation was found between $(ab)^{-1}$ and the ratio

Card: 1/2

B-21

Country	: Poland	
Category	: Surface Phenomena. Adsorption.	B-13
	Chromatography. Ion Exchange.	
Abs. Jour.	: Ref Zhur-Khimiya, No 6, 1959	18698
Author	:	
Institut.	:	
Title	:	
Orig Pub.	:	

Abstract : $S(\text{tot})/S(\text{ext})$, which characterizes the "capilarity" of C, and also between a^b and $S(\text{ext})$. On the basis of an interpretation, proposed by the authors, of processes occurring in PE comprising C having an adsorption layer (AL), the authors designate $(ab)-1$ as index of stability of A, and consider a^b a yardstick of potentiometric effect induced by the presence of adsorption layer and depending primarily on desorption rate. This effect increases with increase of $S(\text{ext})$. The possibility is pointed out of an approximate evaluation of specific surface of C powders solely on the basis of potentiometric determinations.--- Ya.Satunovskiy.

Card: 2,2

Distr: 4E2c(m)

Investigations on the mechanism of a chlorine electrode made up from powdered carbon. H. Jankowska and W. Tomassi (Inst. Technol., Warsaw). *Electrochim. Acta* 3, 211-18 (1960) (in German).—The system consisting of an aq. soln. of KCl and of Cl adsorbed on C was investigated by 3 different methods. The potential of a powder electrode, with Cl adsorbed on the powder, was measured as a function of time. The potential was also measured during the process of Cl adsorption from the KCl soln. The potential changes of a Pt electrode dipping into a 0.5N KCl soln. and those of an anodically polarized Pt electrode surrounded with divided C in the same soln. were followed. The results of all expts. demonstrate that in these systems the potential of the Cl electrode is detd. by the reaction $2\text{Cl}^- = \text{Cl}_2 + 2e^-$ and that in this potential-detg. process the Cl dissolved in the aq. phase is electrochem. active, while the adsorption on the C is not a detg. factor.

P. Van Rysselberghe

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MJC(JD)

TOMASSI, Witold; DUS, Ryszard

An attempt to apply the powder electrode to investigations of the course of chemical reactions on a contact. Przem chem 39 no.1:13-16 Ja '60.

1. Katedra Chemii Fizycznej, Politechnika, Warszawa

TOMASSI, Witold; JANKOWSKA, Helena; WOJTOWICZ, Jan; MILEK, Ryszard

Studies on the reduction of the potentials of electrodes and
of the voltage of electrolysis.. Przem chem 39 no.3:160 Mr '60.

1. Katedra Chemii Fizycznej, Politechnika, Warszawa

TOMASSI, Witold; KDMOROWSKA, Janina

Electrodeposition of zinc under considerably reduced voltage.
Przem chem 39 no.5:251-253 My '60.

1. Katedra Chemii Fizycznej, Politechnika, Warszawa

TOMASSI Witold; JANKOWSKA, Helena; LUTZE-BIRK, Andrzej

Studies on the properties of platinum powder electrodes in
the system $\text{Cl}_2\text{-Cl-H}_2\text{O}$. Przem chem 39 no.7:418-421 J1 '60.

1. Katedra Chemii Fizycznej, Politechnika, Warszawa

TOMASSI, Witold; ZIEMIEŃSKI, Wojciech

On the electrolytic decomposition of water under very low voltage
with the application of powder electrodes. Przem chem 39 no.7:421-
423 J1 '60.

1. Katedra Chemii Fizycznej, Politechnika, Warszawa

TOMASSI, Witold; JANKOWSKA, Helena

Studies on the properties of powder electrodes in the system
 $\text{CL}_2\text{-CL-H}_2\text{O}$. Przem chem 39 no.3:496-502 Ag '60.

1. Katedra Chemii Fizycznej, Politechnika, Warszawa

TOMASSI, Witold; KOCOT-BONCZAKOWA, Donata

Utilization of the adsorption process in the work of a galvanic cell. Przem chem 40 no.7:372-374 J1 '61.

1. Katedra Chemii Fizycznej, Politechnika, Warszawa.

TOMASSI, W.

12th Conference of the International Committee of Thermodynamics
and Electrochemical Kinetics, Przem chem 40 no.7:404 JI '61.

27436

P/014/61/040/008/001/008
D233/D305

26.1610

AUTHORS: Tomassi, Witold, Jankowska, Helena, and Mróz, Wacław

TITLE: The use of various activated carbon preparation in oxygen and chlorine electrodes

PERIODICAL: Przemysł chemiczny, v. 40, no. 8, 1961, 427 - 428

TEXT: The combination of gaseous with powder electrodes was investigated to throw some light on the properties of fuel cells. A previous study of the chlorine electrode in conjunction with powdered carbon and pt electrodes showed that the established potential of a powder electrode in the system $\text{Cl}_2 - \text{Cl}^- - \text{H}_2\text{O}$ was always lower than that of an ordinary chlorine electrode. Similar results were obtained by western authors. In general, Cl_2 and O_2 which form anions in the electrode reaction give a negative deviation on a powder electrode, while a positive deviation was obtained with cation forming hydrogen (unpublished work). These pheno-

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#7426

The use of various activated ...

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mena have been utilized by the authors to construct adsorption electrodes, to determine the behavior of 5 Polish activated carbons and of powdered, spectroscopic graphite, in chlorine and oxygen electrodes. The effects of particle size and of leaching the powders with boiling water, boiling ethanol and boiler water again, were investigated. The following reagents were used: once-distilled water, analytically pure KOH and KCL, produced by Chemapol (Prague) and POCh (Gliwice), respectively. Cl_2 was made from pure KMnO_4 (POCh) and pure HCl, and was then passed through saturated aq. KMnO_4 and over crystalline $\text{CuSO}_4 \cdot 5\text{H}_2\text{O}$. Bottled O_2 was purified by bubbling through 25 % KOH. Measurements on the powder electrode in the system $\text{O}_2 - \text{OH}^- \text{H}_2\text{O}$ were carried out at 18-20°C, using the apparatus described by W. Tomassi and D. Kocot-Bonczakowa (Ref. 6: Przem. Chem. 40, 372, 1961). Powdered C was held in a glass vessel with perforated walls, suspended in a 25 % KOH solution saturated with O_2 . Contact with the solution was maintained through

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1735

The use of various activated ...

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D233/D305

a Pt wire. Another electrode, consisting of a Pt wire and a calomel electrode were also included. Using a Ridan potentiometer, the potential of the oxygen electrode was measured against a saturated calomel electrode. Potentials of the powder electrodes which stabilized after 3-6 days, were 0.418 - 0.471 v. lower (on the hydrogen scale) than the potential of the reversible electrode in the case of the activated carbons and 0.252 v lower in the case of graphite. Behavior of the 5 carbon preparations was thought to be essentially non-distinctive. The system powdered 6 - chlorine electrode was studied in the same manner, in a Hoppler thermostat, at $25.0 \pm 0.1^\circ\text{C}$. The potentials stabilized over 3-4 days. Greater variations in the powder behavior were found in this case: the lowering was only 0.028V for graphite and 0.296-0.463v for the activated carbons. It is thought that the potentials measured correspond to stationary not equilibrium, states. In the case of the chlorine electrode, the deviations tend to decrease with increased particle size of the carbons and to increase for the unleached powders. No effect of the surface area of the powders on the potential was ob-

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The use of various activated ...

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D233/D305

served. Furthermore, the deviations tended to increase in the same order as the potentials of the corresponding powder electrodes (in 0.5 N aq. KCl) were decreased. In cells composed of an oxygen of chlorine powder electrode and a hydrogen electrode, considerable tendencies towards polarization were noted in the case of the H_2 and O_2 electrodes. This is ascribed to the greater molecular dissociation energies of these elements. There are 3 tables and 6 references: 4 Soviet-bloc and 2 non-Soviet-bloc. X

ASSOCIATION: Katedra chemii fizycznej, Politechnika Warszawska
(Warsaw Polytechnic, Department of Physical Chemistry)

Card 4/4

TOMASSI, Witold; KOMOROWSKA, Janina

Electrolytic isolation of copper under considerable reduced voltage.
Przem chem 40 no.9:499-500 S '61.

1. Katedra Chemii Fizycznej, Politechnika, Warszawa.

TOMASSI, Witold; WOJTOWICZ, Jan

Studies on the application of an activated carbon anode in the electrolysis of sodium chloride solutions. I. The potential of the powder anode during the electrolysis. Przem chem 40 no.10:556-560 0 '61.

1. Katedra Chemii Fizycznej, Politechnika, Warszawa.

TOMASSI, Witold; JANKOWSKA, Helena

On the electrochemical obtaining of chlorine and copper by applying powder electrodes. I. Electrolysis of hydrochloric acid. Przem chem 40 no.11:624-626 N '61.

1. Katedra Chemii Fizycznej, Politechnika Warszawa.

TOMASSI, Witold; JANKOWSKA, Helena

On the electrochemical preparation of chlorine and copper with
the use of powder electrodes. Pt.2. The obtaining of copper.
Przem chem 40 no.12:679-680 D '61.

1. Katedra Chemii Fizycznej, Politechnika, Warszawa.

TOMASSI; Withhold (Warszawa)

Application of powder electrodes in electrolysis and the
coupling of processes. Wpłechswiat no.1:10-11 Ja '62.

TOMASSI, Witold

On the mechanism of the chlorine electrode process on carbon and platinum powders. Pt. 1. Compilation of experimental data and the thermodynamic model. Przem chem 41 no.2:62-63 F '62.

1. Katedra Chemii Fizycznej, Politechnika, Warszawa

TOMASSI, Witold

Deliberations on the mechanism of the electrode process of
the chlorine electrode on carbon and platinum powders. Pt. 1.
Compilation of experimental data and the thermodynamic model.
Przem chem 41 no.2:62-64 F '62.

1. Katedra Chemii Fizycznej, Politechnika, Warszawa.

TOMASSI, Witold

Notes on the mechanism of the electrode process of the chlorine electrode on carbon and platinum powders. II. Mechanism of the electrode process. Przem chem 41 no.3:126-128 Mr '62.

1. Katedra Chemii Fizycznej Politechniki Warszawskiej

TOMASSI, Witold; JANKOWSKA, Helena; CHELSTOWSKA, Teresa

On the electrochemical obtaining of chlorine and copper with the use of powder electrodes. Pt. 3. Coupling the process of obtaining copper with the process of obtaining chlorine. Przem chem 41 no.4:183-185 Ap '62.

1. Katedra Chemii Fizycznej, Politechnika, Warszawa.

TOMASSI, Witold; JODZEWICZ, Wanda

Studies on the application of the powder cathode with activated carbon in the process of electrolysis of aqueous solution of sodium chloride. I. Preliminary measurements. Przem chem 41 no.6:297-300 Je '62.

1. Katedra Chemii Fizycznej, Politechnika, Warszawa.

TOMASSI, Witold

A few remarks on chemical laboratories in academic colleges in
Italy. Przem chem 41 no.7:403 J1 '62.

TOMASSI, Witold; PIETRZYK, Stanislaw

On the electrochemic production of porous electrodes for
the construction of elements. (Preliminary note)
Przem chem 41 no.8:422 Ag '62.

1. Katedra Chemii Fizycznej, Politechnika, Warszawa.

TOMASSI, Witold; JANIKOWNA, Maria

Halogen electrodes on carbon and platinum powders. Przem
chem 41 no.8:449-451 Ag '62.

1. Katedra Chemii Fizycznej, Politechnika, Warszawa.

P/014/62/041/011/001/002
D204/D307

AUTHOR: Tomassi, Witold

TITLE: An electrochemical method of determining the adsorptive characteristics of porous electrodes

PERIODICAL: Przemysł Chemiczny, v. 41, no. 11, 1962, 634-636

TEXT: A description is given of a simple method based on a thermodynamic model proposed by the author (Przem. Chem., 41, 62 (1962)), which allows an assessment of the adsorption capacity of the electrode material, energy characteristics and statistics of the active centers. Preparation of the powdered electrode material is discussed on the basis of the earlier work quoted above. The method consists of the evolution, at a constant, low current density (10 ma to 50 μ a per g), of the product of electrolysis (e.g. halogens, H_2 , O_2) at the powder or porous electrode, where it is adsorbed. The electrode, which must be in equilibrium with the solution, is formed from powder around a central Pt or C rod. The resulting potential-time curves ('sedimentation curves', such as e.g. Fig. 1

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for Cl_2) are plotted. For any time τ_0 the electrode potential is given by section $\tau_0\text{II}$, which is II (say $\Delta\pi$ volts) below the evolution potential of gaseous chlorine ($\text{B3}'$, i.e. section $\tau_0\text{II}$), so that $2F \cdot \Delta\pi = \Delta G$, the difference between the molar thermodynamic potentials of free gaseous Cl_2 at 1 atm and chlorine adsorbed on the electrode. Every point on the curve thus corresponds to the mean thermodynamic potential of the adsorbed species, the amount of which is theoretically calculable from the (known) current efficiency of the process concerned. The gentler the slope of the sedimentation curve the greater the number of active centers possessing thermodynamically similar characteristics. Such properties may thus be compared by comparing curves obtained for the sedimentation of various species on the same electrode material, or for the sedimentation of the same species on different materials. Refinements of the method are described and examples are quoted. There are 3 figures. ✓

ASSOCIATION: Katedra Chemii Fizycznej Politechniki Warszawskiej
(Department of Physical Chemistry, Warsaw Polytechnical Institute)

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An electrochemical method ...

P/014/62/041/011/001/002
D204/D307

SUBMITTED: June 8, 1962

Fig. 1

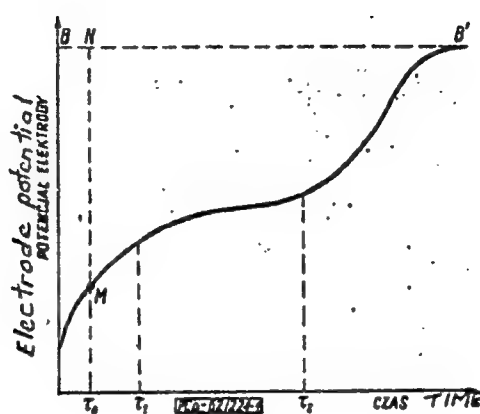


Fig. 1

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TOMASSI, Witold; REWAJ, Maria

Studies on the electrolysis of cupric chloride CuCl_2 by using the powder anode. Przem chem 41 no.11:636 H '62.

1. Katedra Chemii Fizycznej, Politechnika, Warszawa, i Katedra Chemii Fizycznej, Politechnika, Szczecin.

P/014/62/041/012/004/005
D204/D307

AUTHORS: Tomassi, Witold, Jankowska, Helena and Zbudniewek,
-Wanda

TITLE: The coupling of adsorptive and chemical processes

PERIODICAL: Przemyśl Chemiczny, v. 41, no. 12, 1962, 690-692

TEXT: The aim of the present work, which is a development of an earlier study (Przem. Chem., 41, 62 (1962)), was to investigate the changes in thermodynamic functions caused by adsorption. The attention was focussed on the reactions: (1) $2\text{AgCl(s)} + \text{H}_2\text{(g)} = 2\text{Ag(s)} + 2\text{HCl(g,aq.)}$; (2) $\text{Hg}_2\text{Cl}_2\text{(s)} + \text{H}_2\text{(g)} = \text{Hg(c)} + 2\text{HCl(g,aq.)}$; (3) $2\text{Ag(s)} + \text{Cl}_2\text{(g)} = 2\text{AgCl(s)}$; (4) $2\text{Hg(c)} + \text{Cl}_2\text{(g)} = \text{Hg}_2\text{Cl}_2\text{(s)}$; and (5) $\text{Cl}_2\text{(g)} + \text{H}_2\text{(g)} = 2\text{HCl(g,aq)}$ and it was attempted to reverse these reactions by means of adsorption. The adsorbents used were activated carbons CH and CRa, and spectroscopic purity powdered graphite CS; the size fractions were 0.06 to 0.25 mm. The reactions were carried out electrochemically, at $18 \pm 2^\circ\text{C}$. (1) In a cell consisting of an Ag wire (cathode) immersed in 1N HCl and a powder C

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(anode) with a Pt lead, AgCl was spontaneously deposited on the Ag. No such reaction proceeded in the absence of carbon. It is calculated that adsorption on C lowers the standard molar thermodynamic potential of H_2 by ~ 30 kcal/mole. Reactions (3) and (4) could not be reversed, although this would be possible with stronger adsorbents. Reaction (2) was reversed by using the cell: Hg (cathode) | 1N HCl | powdered C (anode). To reverse reaction (5), 2 kinds of adsorbents had to be used (a and b) which adsorbed (a) H_2 strongly, Cl_2 weakly, and (b) H_2 weakly and Cl_2 strongly. The system selected was: powdered CH electrode (anode) | 1N HCl (aq) | powdered CRa electrode (cathode). It is thus possible to induce chemical reactions under physical conditions at which they would not ordinarily proceed spontaneously, by choosing suitable adsorbents. Reversed reactions (1) and (2) may readily be utilized for the preparation of AgCl and calomel electrodes. Reversal of (5) may prove even more useful, since adsorbed chlorine is a convenient chlorinating agent (leaving the C which may then be re-used), while H_2 may be simply desorbed from the other carbon by exposure to air over 24 hours.

ASSOCIATION: Katedra Chemii Fizycznej Politechniki Warszawskiej

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The coupling of ...

P/014/62/041/012/004/005
D204/D307

(Department of Physical Chemistry, Warsaw Polytechnic Institute)

SUBMITTED: July 7, 1962

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P/014/63/042/001/003/004
D204/D307

AUTHORS:

Tomassi, Witold and Kocot-Bończakowa, Donata

TITLE:

The influence of covering the surface of a carbon with molecules of an inert substance on the potential of a chlorine electrode formed on the powder of this carbon

PERIODICAL:

Przemysł Chemiczny, v. 42, no. 1, 1963, 23-26

TEXT:

The present work, which is a continuation of a series of earlier studies with the powder electrode, was aimed at determining the changes in the static potential, consequent upon changes in the energetics of the adsorption of chlorine on the carbon. The potentials were measured at $25 \pm 0.5^\circ\text{C}$, in 0.5 M KCl or 0.5 M HCl, using a powder electrode (prepared from carbon covered with Cl_2CCOOH , chloral, CCl_4 , C_2Cl_6 , starch and saccharose) and a solid Pt electrode. Activated carbon CD was employed for the powder electrode. The highly chlorinated adsorbents led to an increase in the potential, while the carbohydrates reduced it (w.r.t. the value

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D204/D307

obtained on untreated carbon). These results were complemented by tests with anthracite powder, which was formed into electrodes before and after purification. Considerably higher potentials were observed on the purified material. It is concluded that adsorption of large molecules on the powdered carbon hinders the adsorption of chlorine, whilst the presence of highly chlorinated compounds on the surface facilitates the adsorption by providing active centers. There are 4 figures.

ASSOCIATION: Katedra Chemii Fizycznej Politechniki Warszawskiej
(Department of Physical Chemistry, Warsaw Polytechnic Institute)

SUBMITTED: July 24, 1962

Card 2/2

TOMASSI, Witold; PIETRZYK, Stanislaw; CHELSTOWSKA, Teresa

Studies on the use of the deposition curves method for characterizing porous electrode materials. Pt. 2. Przem chem 43 no. 2: 69-70 F '64.

1. Katedra Chemii Fizycznej, Politechnika, Warszawa.

TOMASSKIY, I.S., kand.tekhn.nauk; SYRKIN, V.G.

Production of powder carbonyl iron abroad. Biul.tekh.-ekon.
inform.Gos.nauch.-issl.inst.nauch. i tekhn.inform. 16 no.11:
89-90 '63. (MIRA 16:11)

TOMASU, V.

Chain conveyors. Automatizace 4 no.11:338 N '61.

(Conveying machinery)

TOMASU, Viktor

Electromagnetic vibration bunkers. Automatizace 4 no.12:366 D '61.

1. OTS, Kovotachna.

(Vibrators)

TOMASYAN, R.L., mladshiy nauchnyy sotrudnik

Case of patent ductus arteriosus. Vop.rent.i onk. 6:163-166
'61. (MIRA 16:2)
(DUCTUS ARTERIOSUS) (BLOOD—CIRCULATION, DISORDERS OF)

TOMASYAN, R.L., mladshiy nauchnyy sotrudnik

X-ray diagnosis of anomaly of vena azygos. Vop.rent.i onk. 6:
167-169 '61. (MIRA 16:2)
(AZYGOS VEIN--ABNORMITIES AND DEFORMITIES)

TOMASZ, Stanislaw, mgr inz., st. asystent

Axial fans with nonprofiled blades. Przegl mech 24 no.9:269-
271 10 My '65.

1. Department of Thermodynamics and Power Engineering of the
School of Mining and Metallurgy, Krakow.

ACC NR: AP6032603

SOURCE CODE: PO/0032/66/013/003/0393/0400

AUTHOR: Tomasz, Stanislaw (Warsaw)

ORG: none

TITLE: Establishment of the optimum geometrical parameters of a diffuser of a high-pressure axial fan with straight blades

SOURCE: Archiwum budowy maszyn, v. 13, no. 3, 1966, 393-400

TOPIC TAGS: axial fan, diffuser, fan, *diffuser design*

ABSTRACT: A conical diffuser was selected experimentally for a high-pressure axial fan with straight blades. Nine different diffusers were tested. The diffuser with $m = 2.2$ and $\theta = 9^\circ$ (m is the ratio of the exit and inlet cross-section areas; θ is the divergence angle) proved to be the most useful in the case of non-uniform velocity distribution along the radius at the outlet of the fan. The highest efficiency of the fan was reached for $m = 2.2$ and $\theta = 12^\circ$. The problem of the limiting blade setting angle is discussed as a function of the diffuser divergence angle. Orig. art. has: 8 figures.

SUB CODE: 13,202/SUBM DATE: Mar65/ ORIG REF: 002/ .OTH REF: 002/

Card 1/1

MORECKI, A., doc., dr., inz.; STAHL, J., mgr., inz.; TOMASZCZYK, T., mgr., inz.

Thermometric measurements of angular velocity. *Fizyka* 7 no.10:403-404
0 '61.

(Physical measurements)

FODOR, Gabor, akademikus; MQHACSI, Tivadar; TOMASZ, Jeno

Present state of the chemistry of nucleotides. Kem tud
kozl MTA 19 no.2:163-179 '63.

1. Magyar Tudományos Akademia Sztereokemiai Kutato
Csoportja, Budapest. 2. "A Magyar Tudományos Akademia
Kemiai Tudományok Osztályának Közleményei"
szerkeszto bizottsagi tagja (for Fodor).

FOIA/ASL, J.

Distr: 4E3d

Simple synthesis of pentacene. V. Bruckner, A. Kar-
czag Wilhelms, K. Kormendy, M. Meszaros, and J.
Tomasz (L. Eötvös Univ., Budapest, Hung.). *Tetra-*
hedron Letters 1960, No. 1, 5-6.—Pentacene-6,13-quinone
[50 g., obtained in 78% yield from cyclohexane-1,4-dione
and α -C₆H₄(CHO)₂ according to Ried and Anthofer (CA
48, 12731b)] refluxed 48 hrs. with 50 g. Al in 1000 ml. C-
H₁₁OH gave 21-3 g. pentacene, purified without loss by
washing with C₆H₁₁OH, hot AcOH, concd. HCl and H₂O.
It was assumed that similar redn. of quinone or diquinones
with Al alcoholates may be successfully employed for the
prepn. of the corresponding hydrocarbons.

C. R. Addman

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899(NB)
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BRUCKNER, Viktor (Gyozo), prof. (Budapest); KARCZAG (Wilhelms), Adrienne (Budapest); KORMENDY, Karoly (Budapest); MESZAROS, Mimir (Budapest); TOMASZ, Jeno (Budapest)

A simple and productive synthesis of pentacene. Acta chimica Hung 22
no.4:443-448 '60. (EEAI 10:2)

1. Institute of Organic Chemistry, Lorand Eotvos University, Budapest.
(Pentacene)

TOMASZ, Stanislaw

Testing the centrifugal compressor stator by the static method. Przegl naukowo-tech AGH no.4:41-45 '61.

1. Zaklad Pomp, Sprzazek i Wentylatorow, Akademia Gornicz-Hutnicza, Krakow.

6.2194
6180

AUTHORS:

Morecki, A., Doctor, Docent, Stahl, J., Master of Engineering
and Tomaszczyk, T. Master of Engineering

84455
P/034/60/000/007/001/003
A225/A026

TITLE:

Measurement of Linear and Angular Accelerations in Mechanical
Works and Machines by Means of Tensiometric Acceleration
Meters

PERIODICAL:

Pomiary-Automatyka-Kontrola, 1960, No. 7, pp. 252-254

TEXT:

The authors describe two gauges which measure the rate of acceleration in machines by means of a flexure-sensitive resistor mounted on a flexible-weight support. One of them serves for the measuring of linear accelerations (Fig. 1), the other for angular accelerations (Fig. 4). They are connected to Kelvin & Hughes graphic recorders. The linear acceleration gauge (Fig. 1) consists of a mounting made of duralumin (1), of a bakelite support (2) with flexure-sensitive resistors (3) cemented on, which holds a lead weight (4) on top. The entire device is protected by a plexiglass cylinder (5) screwed onto the mounting base and tightly closed by the cap (6). The inside of the cylinder may be filled with oil used as oscillation damper. The other gauge for the measuring of angular acceleration is similar in principle.

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Measurement of Linear and Angular Accelerations in Mechanical Works and Machines by Means of Tensiometric Acceleration Meters

Measurements is based on the same principle, but here two gauges like the ones described above are mounted on a revolving axle (Fig. 4, 2) which may be connected with the shaft of the measured motor. Electrical connections run through the mercury commutator (3). The measured accelerations may amount to 0.1 - 5 g. The ratio between the inherent oscillations of the instrument and the measuring oscillations should amount to 8:10 (without damping), 2:3 (with damping). The gauge's own oscillation may not be smaller than 150 cycles, the range of temperature: -20 to +30°C. The formula for the computation is:

$$C_{st} = 2 \epsilon = 12 \frac{G \cdot L}{E \cdot b \cdot h_o^2} \quad (1)$$

The symbols represent: C_{st} - static sensitivity of the gauge in cm/cm at 1 g acceleration; ϵ - surface distortion at the support base at 1 g acceleration; G - weight of the lead ballast; L - distance from the weight center to the point of attachment in cm; E - modulus of elasticity of

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P/034/60/000/007/001/003
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Measurement of Linear and Angular Accelerations in Mechanical Works and
Machines by Means of Tensiometric Acceleration Meters

support; b - width of support in cm; h_0 - thickness of support in cm.
Table 1 shows various parameters of the constructional elements. There
are 11 figures, 1 table and 3 references: 1 Polish, 2 Soviet.

11

Card 3/3

P. J. P.

*metals mechanical Properties
and tests*

5498* Some Factors Affecting Creep of Carbon Steel. (In Polish) Z. Borysowski and W. Tomaszczyk. *Prace Glownego Instytutu Metalurgii*, v. 3, no. 8, 1951, p. 507-515. Effects of chemical composition and other metallurgical factors were studied. Results are charted, tabulated, and discussed. 21 ref.

TOMASZCZYK, W.

✓ Tomaszczyk W., Borysowski Z. Creep Strength of Low Alloy Chrome-Molybdenum Steels.

„Wytrzymałość na pełzanie niskostopowych stali chromowo-molibdenu-
nowych” (Prace Inst. Metalurgii No. 3), Katowice, 1952, PWT, 95 pp.,
10 figs., 12 tabs.

Polish Technical Abst.
No. 1 1954
Metallurgy

The authors examine the results of creep strength tests on low alloy chrome-molybdenum steels, taking into account the deoxidizing method, chemical composition and heat treatment of such steels. The paper contains results of graphitization investigations, with which as a basis it is possible to determine the minimum chrome content necessary to ensure structural stability in these steels. The authors drew up tables of the mechanical properties of low alloy chrome-molybdenum steels at high temperatures, and give here the range of their application. Low alloy chrome-molybdenum steels are a good and cheap structural material for elements working at high temperatures. Steels of this group which contain 1% chrome are already, to a certain degree, resistant to corrosion and oxidation. Their resistance to the action of such factors increases with the increase in chrome content. Chrome-molybdenum steels with as little as 0.5% chrome content, are resistant to graphitization, the structural stability of such steels increasing with the increase in chrome content. The high creep resistance of steels with 0.5% Cr — 0.5% Mo, their resistance to graphitization, and then good technological properties (hot bending, weldability) make them a good structural material for superheater pipes up to the temperature of 535°C. The effect of chemical composition and heat treatment upon creep strength in low alloy chrome-molybdenum steels depends to a large extent upon the structure obtained. In the higher temperature range (above 550°C) ferritic-pearlitic or ferritic-bainitic structure is desirable; at lower and medium temperatures — the bainitic structure.

10M402227K, W.

Polish Technical Abstracts
No. 4, 1953
Metallurgy

1385

669.15.26.28-194:620.172.351.2

Tomasz W., Borysowski Z. Comparison of Relaxation Tests with Creep Tests

"Porównanie prób złuzienia z próbami pełzania", (Prace Inst. Metallurgii No. 4), Katowice, 1952, PWT, 10 pp., 10 figs., 6 tabs.

The authors compare the relaxation tests of CrMn steels with creep tests at a temperature of 530°C, admitting the hypothesis of steel aging and of strain-hardening. A high degree of conformity was obtained between the creep rates in the relaxation test at the initial stress of 35 kg/mm² and the creep rates calculated from creep tests according to the hypothesis of steel aging. At the initial stress of 30 kg/mm² the conformity of results for the relaxation curve was less satisfactory. Considerable divergences between the corresponding creep rates were obtained when admitting the hypothesis of strain-hardening.

TOMASZCZYK, W.

2575

669.15.38-184. 820.172.251.2

✓ Tomaszczyk W., Borysowski Z. Creep Strength of Carbon-Molybdenum Steels

Polish Technical Abst.
No. 1 1954
Metallurgy

„Wytrzymałość na pełzanie stali węglowo-molibdenowych” (Prace Inst. Metalurgii No. 2), Katowice, 1952, PWT, 14 pp., 18 figs., 9 tabs.

Influence of various factors on creep strength in carbon-molybdenum steels and in particular the influence of the method of smelting and deoxidation, of the chemical composition and of the heat treatment. Structural changes, leading to nodulation and graphitization, make for a diminution in creep strength. The average mechanical properties of 0.5% Mo steel in higher temperatures are given, on the basis of data available in literature. The authors point out, in conclusion, the necessity of investigating home materials, in order to determine a) the effect of the method of smelting and deoxidation of carbon-molybdenum steel on its strength properties and particularly on creep, b) the most advantageous (as regards creep strength) heat treatment and c) the influence of structural changes on creep strength.

TOMASZCZYK, W.

"The Development of Metallurgy of Alloys Resistant to Weight in High Temperature." p. 148
(HUTNIK, Vol. 20, No. 4, Apr. 1953) Warszawa

30: Monthly List of East European Accessions, Library of Congress, Vol. 2, No. 10,
October 1953. Unclassified.

principles. An older hypothesis explaining the phenomenon of occur-

WAPASZKOWSKI, J.

Influence of the size of grain on the curvability of steel. p. 123

HUTNIK vol. 21, no. 6, June 1954

Poland

80. WAPASZKOWSKI, J. HUTNIK 21, no. 10, Oct. 1954

TOMASZCZYK, W.

Carbon steel P41K and its resistance to creeping. Piuletyn.

p. 35
Vol. 22, no. 9, Setp. 1955
HUTNIK
Katowice

SO: Monthly List of East European Accessions (EEAL), LC, Vol. 5, no. 2
Feb. 1956

TOMASZCZYK, W.

TOMASZCZYK, W. A possibility of substituting long-time creep tests for the short-time ones. p. 459.

Vol. 23, no. 12, Dec. 1956
HUTNIK
POLITICAL SCIENCE
Warszawa, Poland

So: East European Accession Vol. 4, No. 3, March 1957

"APPROVED FOR RELEASE: 04/03/2001

CIA-RDP86-00513R001756210013-5

APPROVED FOR RELEASE: 04/03/2001

CIA-RDP86-00513R001756210013-5"

TOM.SZCZYK, W.

Metallurgy; materials used in atomic-power plants. Pt. 1. p. 163.
(HUTNIK. Katowice. Vol. 24, no. 4, Apr. 1957)

SO: Monthly List of East European Accessions (EEAL) LC, Vol. 6, no. 7, July 1957. Uncl.

TOMASZCZYK, W.

Cleavage plans. p. 74
(HUTNIK, VOL. 24, No. 2, Feb. 1957, Katowice, Poland)

SO: Monthly List of East European Accessions (EEAL) LC, Vol. 6, No. 9, Sept. 1957, Uncl.

TOMASZEK, W.

The knowledge of metals; conclusions from a discussion on the mechanical characteristics of metal properties in technological conditions. p. 123. (Hutnik, Vol. 24, No. 3, Mar 1957, Katowice, Poland)

SO: Monthly List of East European Accessions (EEAL) LC, Vol. 6, No. 8, Aug 1957. Uncl.

NERLO, Henryk; ANDRZEJEWSKI, Jerzy; TOMASZEK, Barbara

Contamination of eye drops, with special consideration of drops containing antibiotics. Ann. Univ., Lublin sect.D 16:417-421 '61.

1. Z Katedry i Zakładu Farmacji Stosowanej Wydziału Farmaceutycznego Akademii Medycznej w Lublinie Kierownik: doc. dr farm. Henryk Nerlo.
(SOLUTIONS OPHTHALMIC) (ANTIBIOTICS)

TOMASZENKO,R.

Correlation between coefficients of circulation on the sea
and on the level of 700 mb. In Russian. p. 52.
Vol. 4, no. 1, 1956 Warszawa
ACTA GEOPHYSICA POLONICA

SOURCE: East European Accession List (EEAL) Library of Congress
Vol. 5, no. 8, August 1956

21(8)

AUTHOR: Tomaszenko, Roman

POL/26-59-1-9/20

TITLE: About Determining the Dates of Nuclear Explosions by Measurements of the Radioactivity of Atmospheric Precipitation

PERIODICAL: Acta geophysica polonica, 1959, Nr 1, pp 55-63 (Poland)

ABSTRACT: The author discusses the numerical and graphical determination of the date of the explosion in 2 cases of atmospheric precipitation. The measurements of the radioactivity were made at the Institute of Aerology at Legionowo. The starting point of the author's considerations is the known formula for the mixture of β -radioactive elements: $A_t = A_0 e^{-kt}$ where A_t is the radioactivity of the fissured products after lapse of time $-t$ from the moment of explosion; A_0 is the radioactivity at the moment of explosion; k is the power-exponent, accepted always as 1.2. The author explains the dependence of the power-exponent k on the time passed since collection of the precipitation. The results obtained

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POL/26-59-1-9/20

About Determining the Dates of Nuclear Explosions by Measurements of the Radioactivity of Atmospheric Precipitation

are shown in the tables and are illustrated by graphs. The graphs indicate the possibility of using the graphic method (to simplify it we accept $k = 1$) for determination of the date of the nuclear explosion, approximately 20 days after collection of the precipitation. Of course the determination of the date of explosion by the graphic method is not exact. However, very often especially in cases of large increases in radioactivity in precipitation the graphic method is satisfactory and very convenient. There are 6 graphs and 2 tables.

ASSOCIATION: Zakład aerologii PIHM, Legionowo (Institute of Aerology of the "State Institute of Hydrology and Meteorology", Legionowo) ✓

SUBMITTED: November 6, 1958

Card 2/2

TOMASZENKO, R.

On the determination of dates of nuclear explosions by measuring the radioactivity of atmospheric precipitation. p.55.

ACTA GEOPHYSICA POLONICA. Warszawa, Poland. Vol.7, no.1, 1959.

Monthly List of East European Accessions Index (EEAI), LC. Vol. 8, No. 9, September 1959
Uncl.

TOMASZENKO, R.

TOMASZENKO, R. Correlation Between Coefficients of Air Circulation on the Sea Surface and on the Level of 700 mb. Acta Geophysica Polonica 1956, v. 4, no. 1, p. 52, Warszawa (Polish Academy of Sciences).

TOMASZENKO, R.

TOMASZENKO, R. Researches on the upper strata of the atmosphere during the 3rd
International Geophysical Year. p. 6

Vol 9, no. 9, Sept. 1956
GACETA OBSERWATORIA P.I.H.M.
SCIENCE
Warszawa, Poland

So: East European Accession vol 6, no. 3, March 1957